

In their filing of July 7, 2003, Main.net proposes that BPL emissions be regulated according to their proximity to broadcast receivers. This would be an acceptable proposal if their technology operated in areas of the radio spectrum in which propagation occurred by line-of-sight, rather than in the High Frequency portion of the spectrum. High Frequency radio waves can propagate long distances by ionospheric reflection, even at very low power levels. The nature of HF propagation makes BPL-generated interference potentially a worldwide problem. As a licensed amateur in Colorado, I have made a contact with a station in New Zealand who was running only 3 watts. Other users of the HF spectrum make similar long-distance contacts all the time. Proximity between the stations has nothing to do with it. It is ionospheric reflection.

Long distance propagation of HF radio waves is a major concern from the standpoint of the regulations. If BPL equipment is causing interference to a station 500, 1000, or 10,000 miles away, it could be tough to identify the offending system. But the system is still causing interference. I urge the FCC to think through how technology can be applied to identify the actual BPL systems that are causing harmful interference before the technology is rolled out large-scale.

Testing conducted by Main.net is similarly flawed. They tested an Access BPL system at three locations, and an in-home BPL system at another three locations, and concluded there was no radio frequency interference. This is such a small sample that no statistically significant conclusions can be drawn from it, even using small-sample methods.

Furthermore, their testing treated BPL installations as point sources, measuring radially from an in-home system at fixed distances. This testing ignores the fact that powerlines can be miles long with ambiguous near-field patterns. Furthermore, many power lines that will be encountered in real-world rollouts of this technology will radiate more efficiently than they conduct.

In short, both the hypotheses and the testing methods of this commenter are flawed. Let them implement their system with, at minimum, the Part 15 restrictions in place. If there is no problem, there is no problem. If there IS a problem, however, at least Part 15 will require them to mitigate it.